6DS4

High-Mu Triode

NUVISTOR TYPE

HAVING EXTENDED CUTOFF CHARACTERISTIC

For Use as Grounded-Cathode, Neutralized RF-Amplifier Tube in Tuners of VHF Television and FM Receivers Featuring Improved Weak-Signal-Area Reception

GENERAL DATA

Electrical: ←

Heater Characteristics and Ratings *(Design-Maximum Values)*:

Voltage (AC or DC)	6.3 ± 0.6	volts
Current at heater volts = 6.3	0.135	amp
Peak heater-cathode voltage:		
Heater negative with respect to cathode	100 max.	volts
Heater positive with respect to cathode	100 max.	volts

Direct Interelectrode Capacitances (Approx.):

Grid to plate	0.92	μμf
Grid to cathode, shell, and heater	4.3	μμf
Plate to cathode, shell, and heater	1.8	μμf
Plate to cathode	0.18	μμf
Heater to cathode	1.6	μμf

Characteristics, Class A_1 Amplifier:

Plate Supply Voltage	110	volts
Grid Supply Voltage	0	volts
Cathode Resistor	130	ohms
Amplification Factor	63	
Plate Resistance (Approx.)	7000	ohms
Transconductance	9000	μmhos
Plate Current	6.5	ma
Grid Voltage (Approx.) for plate μa = 100	-5	volts
Grid Voltage (Approx.) for plate μa = 10	-6.8	volts

Mechanical:

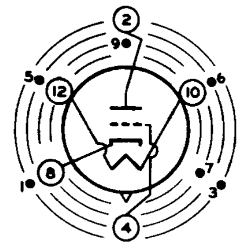
Operating Position	Any
Type of Cathode	Coated Unipotential
Maximum Overall Length	0.800"
Maximum Seated Length	0.625"
Maximum Diameter	0.440"
Envelope	Metal Shell MT4
Socket	Cinch Mfg. Corp. No. 133 65 10 001, ← Industrial Electronic Hardware Co. No. Nu 5044 or No. Nu 5060, or equivalent
Base	Medium Ceramic-Wafer Twelvar 5-Pin (JEDEC No. E5-65)

← Indicates a change.

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Basing Designation for BOTTOM VIEW. 12AQ

Pin 1[a] - Do Not Use
Pin 2 - Plate
Pin 3 - Same as Pin 1
Pin 4 - Grid
Pin 5 - Same as Pin 1
Pin 6 - Same as Pin 1
Pin 7 - Same as Pin 1
Pin 8 - Cathode
Pin 9 - Same as Pin 1
Pin 10 - Heater
Pin 12 - Heater



INDEX=LARGE LUG
●=SHORT PIN

AMPLIFIER — Class A$_1$

Maximum Ratings, *Design-Maximum Values:*

PLATE SUPPLY VOLTAGE.	300[b]	max.	volts
PLATE VOLTAGE	135	max.	volts
GRID VOLTAGE:			
Negative-bias value	55	max.	volts
Peak-positive value	0	max.	volts
CATHODE CURRENT	15	max.	ma
→ PLATE DISSIPATION:			
With a minimum series plate-circuit resistance of 5000 ohms	1.5	max.	watts
For lower values of series plate-circuit resistance.	See accompanying *Plate-Dissipation-Rating Chart*		

Typical Operation:

Plate Voltage	70	volts
Grid Supply Voltage	0	volts
Grid Resistor	47000	ohms
Amplification Factor.	68	
Plate Resistance (Approx.).	5440	ohms
Transconductance.	12500	μmhos
→ Plate Current	7	ma

Maximum Circuit Values:

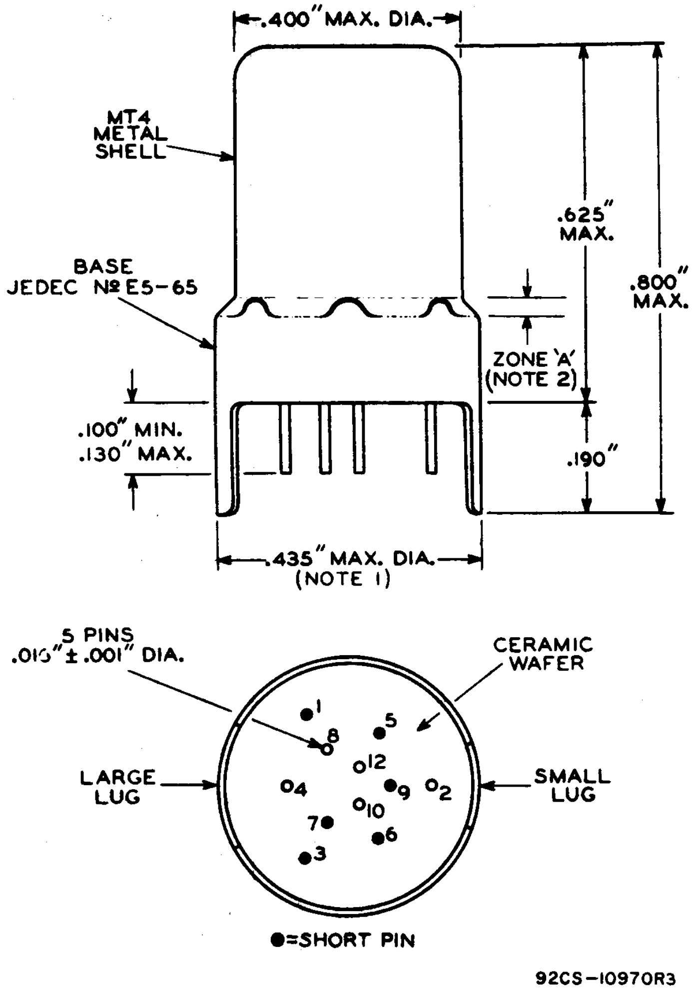
Grid-Circuit Resistance:[c]			
For fixed-bias operation.	0.5	max.	megohm
For cathode-bias operation.	2.2	max.	megohms

[a] Pin is of a length such that its end does not touch the socket insertion plane.

→ [b] A plate supply voltage of 300 volts may be used provided sufficient plate-circuit resistance and agc voltage are used to limit the voltage at the plate of the tube to 135 volts under conditions of maximum-rated plate dissipation (1.5 watts).

→ [c] For operation at metal-shell temperatures up to 135° C.

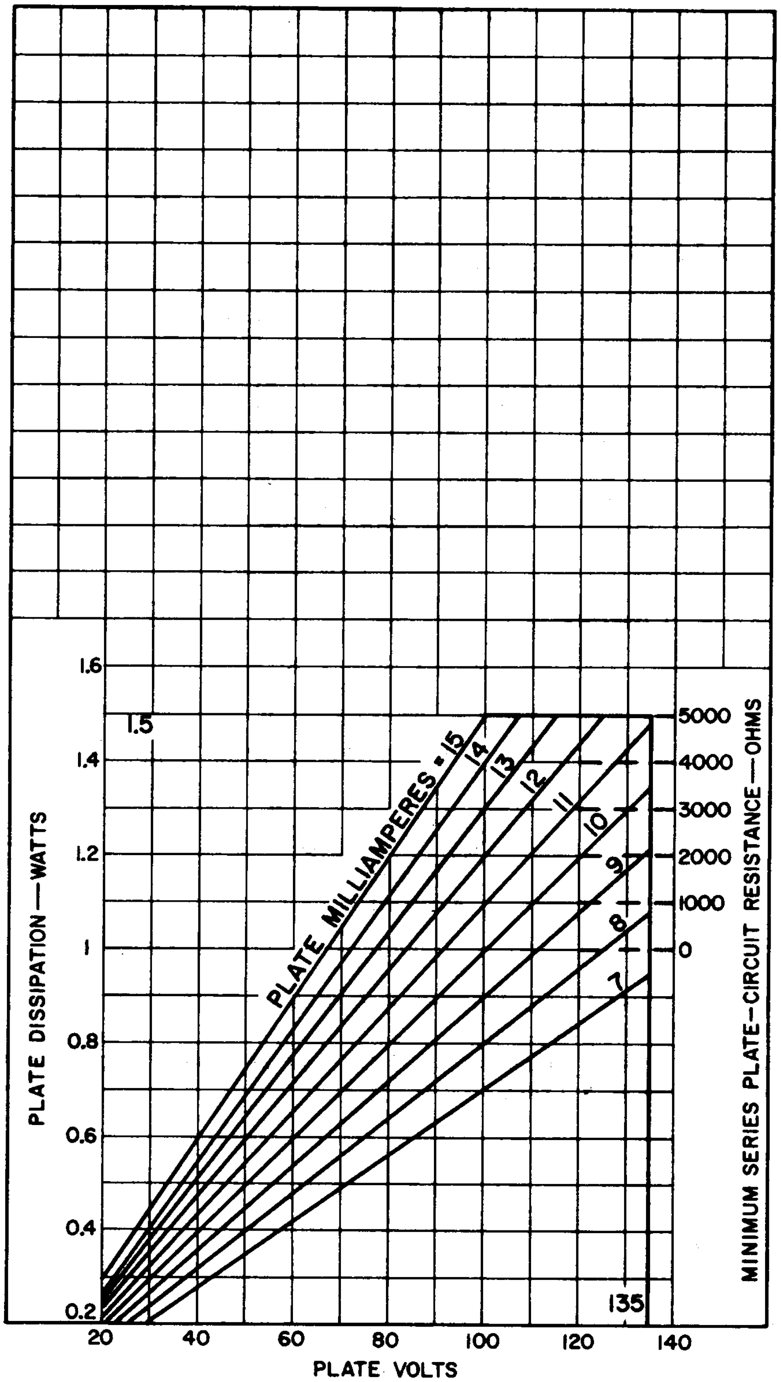
→ Indicates a change.



NOTE 1: MAXIMUM OUTSIDE DIAMETER OF 0.440" IS PERMITTED ALONG 0.190" LUG LENGTH.

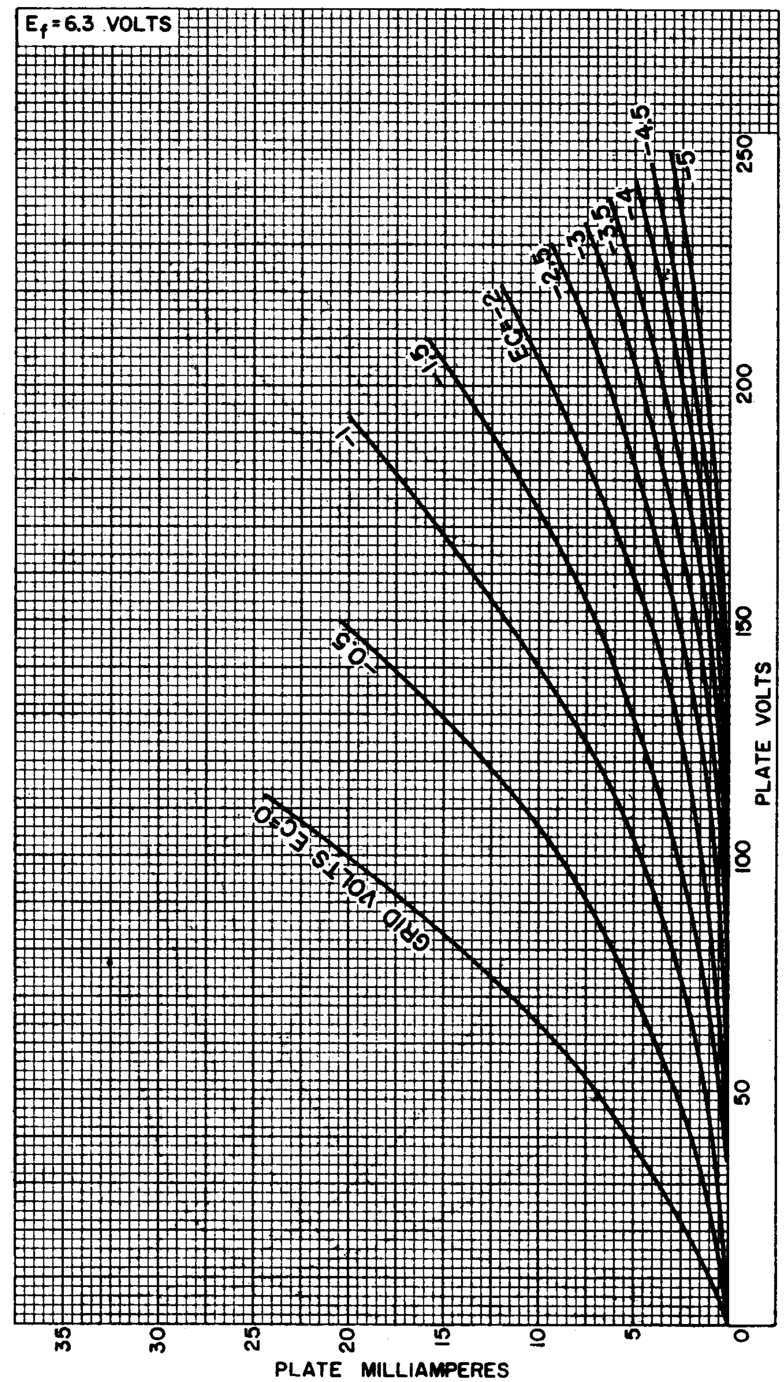
NOTE 2: SHELL TEMPERATURE SHOULD BE MEASURED IN ZONE "A" BETWEEN BROKEN LINES.

PLATE-DISSIPATION-RATING CHART



92CM-11681

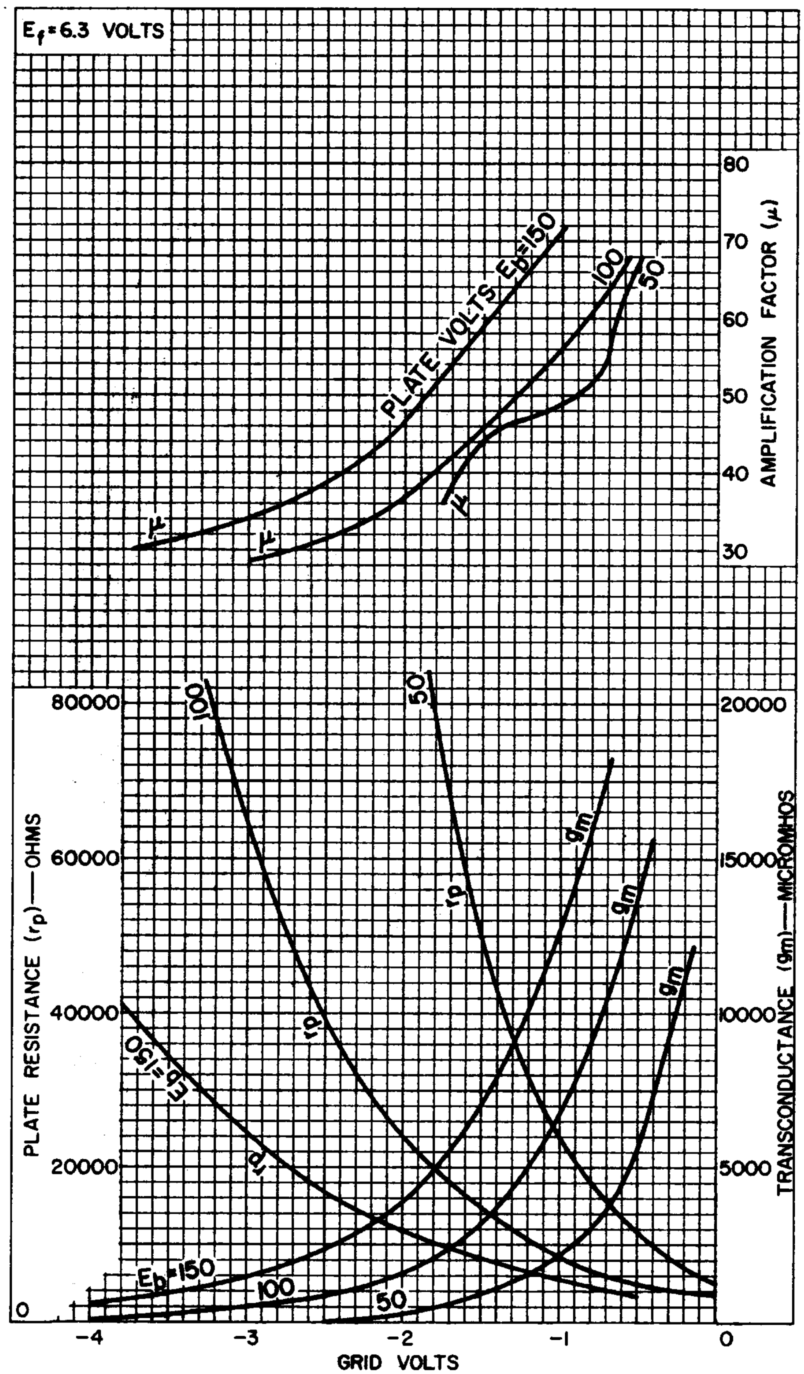
AVERAGE PLATE CHARACTERISTICS



92CM-11209

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AVERAGE CHARACTERISTICS



92CM-11210